July 10, 2017

STATE OF WYOMING

REVISED GREATER SAGE-GROUSE – COMPENSATORY MITIGATION FRAMEWORK

SCOPE

Core Population Areas have been mapped to include additional habitat beyond that strictly necessary to prevent listing of Greater sage-grouse (GSG). The additional habitat included within the Core Population Area boundaries is adequate to accommodate continuation of existing land uses and landowner activities. Development consistent with the stipulations set forth in Executive Order 2015-4 GSG Core Area Protection (EO 2015-4), Attachment B shall be deemed sufficient to demonstrate that the activity will avoid negative long-term impacts to GSG. If a project complies with the stipulations contained in EO 2015-4 for Greater sage-grouse conservation (for example, in Non-Core Population Areas: 0.25 mile No Surface Occupancy, timing limitations; and, for example, in Core Population Areas: 0.6 mile No Surface Occupancy, 5% surface disturbance threshold), no compensatory mitigation is required by the State of Wyoming because impacts to the species have been mitigated through actions of the project proponent. Any project that will require credits and debits and has a federal nexus will be coordinated with the federal agency that is involved with the permitting effort pursuant to the specific sections in the Approved Resource Management Plan Amendments and the Buffalo, Cody and Worland Resource Management Plan Revisions, which state:

> "In undertaking management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation in [Priority Habitat Management Areas], the [Bureau of Land Management (BLM)] will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing and compensating for impacts by applying beneficial mitigation actions. In Wyoming, the [U.S. Fish and Wildlife Service] has found that 'the core area strategy, if implemented by all landowners via regulatory mechanism, would provide adequate protection for sage-grouse and their habitats in the state.' The BLM will implement actions to achieve the goal of net conservation gain consistent with the Wyoming Strategy (EO 2015-4) that includes 'compensatory mitigation as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse.'"

The BLM has agreed to use this Mitigation Framework as stated in the Memorandum of Understanding with the State of Wyoming.

BACKGROUND

GSG are a landscape species, meaning that they occupy and use a variety of seasonal habitats (including some which may be considered marginal or less than ideal) in an interconnected

manner. The Wyoming GSG conservation strategy outlined in EO 2015-4 addresses tolerances of the species to disturbance, disruption and loss of habitat. Any activity that requires a state permit and fails to comply with the stipulations of EO 2015-4 may be denied. Those activities requiring a state permit, but fail to comply with the stipulations of EO 2015-4 and are not denied will be required to provide compensatory mitigation for impacts to GSG. Consistent with EO 2015-4, including Attachment H, the preferred method of resolution of conflicts will be avoidance and minimization, where possible.

Unlike historic banking for wetlands and some other habitats, the GSG compensatory mitigation process is grounded in available credits being part of a complete functional landscape and the availability and assurance of all seasonal habitats within that area. The connection between seasonal habitat needs and reduced disturbance and disruption for GSG remains imperfect; for instance, areas with lower quality habitat may still be important within landscapes. These areas may help provide connectivity between GSG seasonal habitats, and are often integral to the complete landscape function.

Ultimately, the goal of the State of Wyoming is to maintain intact sagebrush landscapes that will adequately provide a variety of habitat needs for GSG and other sagebrush obligate species. This goal includes the efforts of federal agencies as demonstrated by close coordination with the Approved Resource Management Plan Amendments (ARMPA) and Revisions to create a comprehensive and consistent regulatory mechanism.

Compensatory mitigation may be accomplished in two primary manners. The first are "conservation credits," which maintain existing habitats in a landscape context, provide for long-term management consistent with the needs of the species, and remove potential threats to the species from human activities. The second are "restoration credits," which may be used to restore habitats that have been lost or severely impacted and did not meet the habitat needs of the species. Full suitability of lost or severely impacted sites may take decades. However, to provide incentives to restore habitats impacted by historic activities, restoration credits will be given to sites that have improved from lost or severely impacted to a stable and functional condition that demonstrates a positive trend toward suitability (over a period of 5 years), and is currently occupied by GSG. Restoration credits must demonstrate the stability, functionality and occupation before any credits are awarded

Conservation credits are created by removing or limiting a threat to GSG or their habitat for the full duration of the impact or in perpetuity. Restoration credits are created by converting disturbed or low quality habitat to suitable GSG habitat. In some cases, both may occur on the same landscape and should be accounted for accordingly.

CONSERVATION CREDITS

All credits offered as compensatory mitigation for GSG must be evaluated on a landscape scale, and not as an "acre of habitat-for-an acre of habitat trade." A credit, whether through a bank, exchange or other mechanism represents a unit of a functional and intact landscape, and must have relativity to all of the essential habitats required by the species. Inherent in this requirement is the assimilation of indirect credits to the species that are not readily measured, but contribute

to the fully functional landscapes. Simply put, an acre of nesting habitat is of no value to the species if it does not have proximity to breeding areas, brood-rearing areas, and winter habitats. Conversely, an acre with little actual use by GSG, but still meets the ecological potential for the site, such as a rocky crag, is part of the functional landscape and should not be regarded as diminished value. These sites within the overall landscape remove potential threats and provide protection from the placement of disruptive activities.

In order for a land parcel to be considered for GSG "conservation credits," it must be demonstrated that the lands in question meet the following biological requirements:

1. The geographic area designated for credits must have active use by GSG.
2. The geographic area designated for credits must include the habitat attributes identified as essential for perpetuation of GSG, consistent with the ecological potential for the landscape in question.
3. The geographic area designated for credits must be able to support GSG, or have reliable access to all seasonal habitats for the species (breeding and nesting, early brood-rearing, late brood-rearing, winter).
4. The geographic area designated for credits must have active breeding areas (leks) within the landscape (Generally, the credits should be located within 5.3 miles of an active lek. However, there may be circumstances that may be considered which would allow credits in unique circumstances).
5. The area must meet the GSG habitat suitability definition in EO 2015-4, as supplemented by Executive Order 2017-1.

Further, in order for a landscape to be considered for GSG credits, it must meet the following disturbance tolerances for the species:

1. The area designated for credits must be consistent with the tolerances of EO 2015-4 (for example, surface disturbance < 5%, one oil and gas or mining activity per 640 acres on average for the modified Density/Disturbance (MDD) area, collector or arterial roads > 1.9 miles from the perimeter of a lek, no surface occupancy < 0.6 miles from the perimeter of a lek). MDD Areas that exceed 5%, but do not exceed 10% may be eligible for credits; however, the credit will be discounted by 10%. The discount may be removed from unused credit acreage if the disturbance is shown to fall below 5%.

Finally, in order for a landscape to be considered for GSG credits, it must be able to show that it can meet the following tests for durability and risk reduction:

1. The credits must persist for the duration of any offsetting impacts and associated activities or be permanent in nature. Credits that do not meet the durability requirements below will be discounted by 10%.
2. The credits must be adequately secured by reserve accounts additional acreage or by adequate financial assurances to replace any loss of the original credits.

Requirements for conservation credit eligibility are outlined in Table 1.

Table 1

Category	Credit Condition	Credit Requirements
Occupancy	Mandatory	The credit is occupied by GSG.
Disturbance	Mandatory	Disturbance within the area to be considered for credits must be below 10% and 1 per 640 as measured by a modified Density Disturbance Calculation Tool (DDCT) process.
Disturbance	Potential Credit Adjustment	Disturbance within the area to be considered for credits is below 5% and 1 per 640 as measured by a modified Density Disturbance Calculation Tool (DDCT) process. • If disturbance is between 5.01% and 9.99% as measured by the DDCT Process, the credit will be discounted by 10%.
Durability	Mandatory	The credit exists for the life of the project impact.
Durability	Potential Credit Adjustment	The credit has permanent protection. For non-private lands, this would require a conservation credit lease term of not less than fifty (50) years, with a renewal option at the end of the term. • On private land, credits that do not have permanent protection, but are fifty (50) years or greater with a renewal option at the end of the term, will be discounted by 10% per acre.
Financial Assurances/Replacement	Mandatory	Credits include the financial assurances or replacement credits, as appropriate, to guarantee the implementation and effectiveness of compensatory mitigation measures and to cover their administration, durability, monitoring, and reporting.
Habitat Suitability	Mandatory	Habitat suitability must be functional for GSG as verified by an ecological site potential assessment and habitat assessment through the Habitat Assessment Framework (HAF), EO 2015-4 suitability definition (as supplemented by EO 2017-1), or other suitable habitat analysis.
Habitat Suitability	Mandatory	Habitat suitability is greater than 5% sagebrush cover or other EO 2015-4 suitability definition (as supplemented by EO 2017-1).
Additionality	Mandatory	Credits will not be allowed where habitat conservation is otherwise required by law, regulation, permit, or other condition.

Landscape Support	Potential Credit Adjustment	The area proposed for credit must be within a landscape that provides access to all seasonal habitats where potential threats have been ameliorated or removed. Private lands that meet these criteria would receive a landscape context credit increase not to exceed 15%. Any areas not adequately conserved will be discounted from the total increase. Any landscape credit adjustment must be approved by the credit-certifying entity and should be figured in a manner that reflects specific habitat values (for example, the number of leks, the lek population, enhanced credit value based on credit location in relation to protecting a lek, quality of habitat, removal of multiple threats).
Risk Reduction	Mandatory	The credit includes a description of: a. The outcomes of compensatory mitigation measures and the performance standards to be met for the duration of the credit life. Credit descriptions should include the types and amounts of resources that will be restored, established, enhanced, and/or preserved, and how these outcomes will address species' conservation needs at the landscape scale. b. The baseline condition prior to disturbance and future disturbance threats affecting the compensatory mitigation credits (for example, are there 4 seasonal habitats located within 4 miles, what are the existing thresholds, what is the potential for future development?). c. The durability (for example, offset for life of disturbance) of the compensatory mitigation measures and how the credit sites will be maintained. d. The monitoring and reporting program that will be used to report credit conditions and trends of resources at all relevant scales, to assess the effectiveness of compensatory mitigation measures, and to identify any need for adaptive management. e. The triggers for adapting management, if necessary, in order to achieve the outcomes of the compensatory mitigation measures. f. The implementation plan for the enhancement, restoration or funding of compensatory mitigation measure(s) that includes: 1. Specifications for implementing the compensatory mitigation measures (for

		example, timing, method, source materials, specific geographic area). 2. The schedule and plan to maintain compensatory mitigation measures for the duration of the impacts. g. The accounting process for tracking measures/funds/credits.

RESTORATION CREDITS

Compensatory mitigation may be achieved through actions that improve or restore existing landscapes, or areas within landscapes, from a condition that does not currently support GSG, or does not meet the needs of species reflected through HAF assessments, or other defensible habitat assessments, which are consistent with the ecological potential for the site. Restoration credits would only be achieved when the proponent can show that site conditions have been changed from an "unsuitable" condition to a condition that is stable, functional, occupied and trending towards the normal range of variability of appropriate ESDs, as defined by EO 2015-4, Attachment F, and where GSG occupy the site. Credits will be awarded when a disturbed site conforms to the appropriate Ecological Site Description (ESD) and is maintained in a stable state and trend toward optimal GSG habitat for a period of five (5) years. A restoration credit must also meet all the Categories in Table 1 except for the Habitat Suitability category. Improvement will be measured as a functional change in the landscape, and generally will be in the form of credit generation as outlined above. Proponents will be required to annually submit data to show that the credit is not regressing. Restoration credits must adhere to the quality parameters outlined for conservation credits. Any action that is required by law, permitting and reclamation agreements, contracts, or other requirements is not eligible for conservation credits.

DEBITS FOR IMPACTS TO GREATER SAGE-GROUSE

The primary emphasis of the Wyoming GSG conservation strategy is to avoid and minimize impacts to the species first. Since the inception of Wyoming's strategy, those efforts have been employed across the state, and have been effective in avoiding and reducing impacts and threats to the species. However, there are cases when avoidance and minimization still do not meet the EO 2015-4 thresholds, primarily due to pre-existing disturbance. In those cases, where projects cannot be denied due to valid rights, and where avoidance and minimization does not adequately address impacts to GSG, compensatory mitigation may be an appropriate method to assure maintenance and enhancement of the species and its required habitats.

The Wyoming Mitigation Framework is based upon biological, legal and policy requirements for mitigation, including the debit and/or credit principles of replacement, landscape support and vulnerability, durability of mitigation measures, indirect effects from activities, additionality, and timeliness as described in many of the new federal and state mitigation policies. Table 1 contains an outline of the credit parameters. The concepts of replacement, indirect effects, habitat assurance and habitat vulnerability are considered in debit requirements for activities in Core Population Areas, as described below and shown in Table 2.

1. **Replacement**: Replacement is a physical and biological metric that will replace an impacted acre with an equal or greater amount of habitat where threats have been removed or abated. Replacement is calculated on an acre-to-acre basis (based on the footprint of the activity), and is a factor of one-to-one.
2. **Indirect Effects**: Indirect effects are those impacts arising out of an action that extend beyond the actual footprint of the action itself. This includes factors that may cause avoidance or abandonment of habitats not directly impacted. Indirect effects have been calculated through various means over time, and are generally greater in closer proximity to the activity, with a declining effect with distance. Based on the footprint of the activity, indirect effects will be assigned a factor of two-to-one for all actions.
3. **Habitat Assurance:** Potential losses to habitat, populations, or both, must be adequately offset by a greater security of habitats and populations where threats have been removed or abated. Because GSG require large intact landscapes, show great fidelity to habitat, and do not respond well to blind transplants, it is necessary to assure that compensatory mitigation is robust and adequate to reliably remove threats to the species. Based upon the policy of the State of Wyoming, habitat assurance will be assigned (on an acre-to-acre basis) a factor of two-to-one for all actions.
4. **Habitat Vulnerability**: Actions that occur in highly vulnerable or limiting habitat types (for example, wet meadows, high-quality nesting habitat, lands that provide severe winter relief, and other vulnerable habitats identified and confirmed within the DDCT area) will likely be impossible to replace. These areas should be avoided. Where avoidance is not possible, additional debits would be assigned to these habitats on an acre-to-acre basis with a factor of five-to-one.

Other considerations relative to debits, including durability, additionality, timeliness and other factors are adequately addressed in the calculation of credits and should not be applied to both debits and credits. For instance, a credit must show durability for the life of the impact, and thus is reduced appropriately to meet that standard. Specific to the concern of additionality, that determination is not a calculation, but a requirement that the credit not be given for an action that would be otherwise required.

In order to assure the perpetuation of the species, any action that meets the need for compensatory mitigation in Core Population Areas debits will be assessed based upon the criteria and the threshold exceeded. Table 2 below identifies how the replacement, indirect effect, habitat assurance and habitat vulnerability debit factors are calculated for activities in Core Population Areas.

Table 2

Activity in Core Population Areas	Debits
New disturbance in compliance with EO 2015-4 thresholds	0 debits
New disturbance exceeding the 5% disturbance threshold and occurring more than 0.6 miles from an occupied lek	5 debits per acre
Any new disturbance within 0.6 miles from an occupied lek and new collector or arterial roads within 1.9 miles from an occupied lek	10 debits per acre
Greater than 1 activity per 640 acres	10 debits total per activity
Short-term impact (seasonal stipulation relief)	10 debits per activity, per year
Habitat vulnerability (discretionary)	Potential 5 debits per acre of vulnerable habitat

SHORT-TERM IMPACTS

Short-term impacts that require compensatory mitigation (for example, activities during seasonal stipulations or other actions that require less than one year occupancy) will be assessed by the event and not on a per-acre basis. Short-term impacts will be assessed ten (10) debits per activity, per year.[1]

[1] Project proponents should be aware that the BLM has an exception waiver modification criteria process that may be applied to projects on BLM land.

COMPENSATORY MITIGATION IN NON-CORE POPULATION AREAS

For surface occupancy within (<) .25 miles from an occupied lek, compensatory mitigation will be calculated on an acre-to-acre basis (based on the footprint of the activity in suitable habitat within the .25 mile buffer) with a factor of 2:1.

The compensatory mitigation requirement for short-term impacts applies to Non-Core Population Areas. It is the policy of EO 2015-4 to incentivize developments of all types outside of Core Population Areas, including through stipulation waivers and other incentives.

Table 3

Activity in Non-Core Population Areas	Debits
New disturbance in compliance with EO 2015-4 thresholds	0 debits
Within .25 miles from an occupied lek	2 debits per acre of suitable habitat
Short-term impact (seasonal stipulation relief)	10 debits per activity, per year